International Journal of Infectious Diseases (2004) **8**, 194—195

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LETTER TO THE EDITOR

Streptococcus pyogenes bacteremia in the setting of cholangitis

Streptococcus pyogenes bacteremia occurs most commonly in the setting of skin and wound infections, followed by respiratory tract infections.[1] *S. pyogenes* has never been reported to cause cholangitis. Herein we describe a case of cholangitis in the setting of *S. pyogenes* bacteremia.

A 52-year-old man underwent cholecystojejunostomy and gastrojejunostomy for pancreatic cancer in February 2002. His course was complicated by obstructive jaundice and *Escherichia coli* bacteremia in September 2002. He underwent percutaneous transhepatic cholangiography with biliary drainage and received ofloxacin for 14 days. An internal biliary stent was then inserted percutaneously. Two months later he was admitted with chills, abdominal pain and jaundice. He was afebrile but had icterus and hepatomegaly. He had no evidence of pharyngeal erythema, lung or skin infection. White blood cell count was 5.7×10^9/L with 65% neutrophils. Serum bilirubin, alkaline phosphatase, and γ-glutamyl transpeptidase were markedly elevated compared to values obtained on the previous admission. Later, blood cultures grew group A ß-hemolytic *Streptococcus* spp. Computerized tomography of the abdomen revealed intra- and extrahepatic biliary ductal dilatation. The patient was treated with ampicillin and underwent endoscopic biliary stent placement with marked clinical improvement. Since no other organisms were isolated from blood cultures, the patient was diagnosed with *S. pyogenes* cholangitis.

The site of origin of the infecting organisms in cholangitis remains debatable.[2] Gram-negative enteric bacilli and anaerobic bacteria are commonly incriminated and bacteremia occurs in 50% of patients. The most frequently isolated organism is *E. coli*, followed by *Bacteroides fragilis*.[3] Bacteremia due to *S. pyogenes* is an uncommon condition. It has been described in the setting of erysipelas, intraabdominal infections or overwhelming septicaemia,[4—6] but has not been previously reported to occur with cholangitis. Our patient had clinical, laboratory and radiological findings highly suggestive of cholangitis. At the time of the endoscopic retrograde cholangiography, obstruction of the old biliary stent was noted. The source of the streptococcal infection is not certain, but it could have been due to colonization of the biliary stent with *S. pyogenes*. Obstruction of the stent and the subsequent bile stagnation provided a favorable milieu for the growth of this organism, resulting in cholangitis and bacteremia.

Some references have pointed out that group A streptococci do not usually grow in bile,[7] and this is used in vitro to differentiate these organisms from enteric streptococci. It should be noted, however, that this property is also shared by group C, G and viridans streptococci. We found three reports of cholangitis caused by viridans streptococci in the literature.[8—10] This makes cholangitis due to *S. pyogenes* theoretically plausible. It could be that in cases of high inoculum, the bacteria are able to survive in bile and cause clinical disease. In this particular case, we did not test the *S. pyogenes* isolate recovered from blood for its ability to grow in bile.

Although enteric bacteria are the organisms most commonly incriminated in cholangitis, other organisms of non-enteric origin such as *S. pyogenes* may cause cholangitis, especially in the presence of a foreign body in the biliary tree.

Conflict of interest: No conflicting interest declared.

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1201-9712/$30.00
doi:10.1016/j.ijid.2003.11.005

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5 November 2003

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